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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,754	09/18/2001	Charles J. Rice	4810-002	8506
24112	7590	06/04/2004	EXAMINER	
COATS & BENNETT, PLLC P O BOX 5 RALEIGH, NC 27602			NGUYEN, PHONG H	
			ART UNIT	PAPER NUMBER
			3724	

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/954,754	RICE, CHARLES J.
	Examiner Phong H Nguyen	Art Unit 3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 20 November 2003.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-37 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 1-14 is/are allowed.  
 6) Claim(s) 15-24,27,28,30,32,36 and 37 is/are rejected.  
 7) Claim(s) 25,26,29 and 33-35 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 15-24, 27, 28, 30-32, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vernacchio (4,986,154) in view of Tseng (6,269,721 B1).

Regarding claims 15-22 and 32, Vernacchio teaches a tube-forming device comprising a work piece holder 42, a tool 36 having a cutting edge 34 and a tool holder 26. See Figs. 1-4. Vernacchio, however, does not teach a dual action-rotating cam to drive the tool holder 26. Tseng teaches a driving cam 30. See Fig. 3. Therefore, it would have been obvious to provide a cam as taught by Tseng to drive the tool holder in the Vernacchio's tube forming assembly. It is noted that the phrase "dual action rotating cam" is interpreted that a rotating cam that reciprocates a piston in two directions.

Regarding claim 23, cutting tool 36 is changeable by changing the tool holder in Vernacchio.

Regarding claim 24, the tool holder 26 comprising a carrier block and an opening for receiving cutting tool 36. See Fig. 3 in Vernacchio.

Regarding claims 27 and 28, a biasing means 30 is best seen in Fig. 3 in Vernacchio.

Regarding claims 36 and 37, a third phase is the phase which the piston 16 is at a starting position in which a tube is inserted to the tool holder; a first phase is the phase

which the piston 16 is moving to cut the pipe; and a third phase is the phase which the piston 16 is on its way back to its starting location.

Regarding claims 30 and 31, Vernacchio teaches a method of forming the end of a tubular work piece comprising the steps of inserting a tube 28 to a work piece holder 42. See Fig. 3. Vernacchio, however, does not teach a driving mechanism to drive the tool holder 26 which functions as a punch. Tseng teaches providing a rotating cam 30 to driving a punch. See Fig. 3. Therefore, it would have been obvious to provide a rotating cam to drive the tool holder. The rotating cam reciprocates the tool during a three-phase cycle. A third phase is the phase which the piston 16 is at a starting position in which a tube is inserted to the tool holder; a first phase is the phase which the piston 16 is moving to cut the pipe; and a third phase is the phase which the piston 16 is on its way back to its starting location.

#### *Allowable Subject Matter*

3. Claims 1-14 are allowed.
4. Claims 25, 26, 29 and 33-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Response to Arguments*

5. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phong H Nguyen whose telephone number is 703-305-4989. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on 703-308-1082. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PN: *pw*

May 28, 2004

*ac*  
Allan N. Shoap  
Supervisory Patent Examiner  
Group 3700